

Appl. No. 10/075,360
Amdt. Date: Nov. 14, 2003
Reply to Office Action of August 20, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A system for monitoring machines operating at at least one shop floor, the system comprising:

- a plurality of information collectors, each information collector linked to ~~the~~ a corresponding machines for automatically obtaining specific machine-related signals and converting the specific machine-related signal signals into computer-readable information;
- a monitoring computer pre-installed with programmable information obtaining instructions and electrically connected to the information collectors for obtaining the computer-readable information from the information collectors;
- a database electrically connected to the monitoring computer for storing the computer-readable information collected by the monitoring computer and for storing fundamental data set by users; and
- a graphical user interface electrically connected to the database for users to monitor production information.

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Claim 2 (original): The system of claim 1, wherein the machine-related signals include machine status, die status and current production information.

Claim 3 (cancelled)

Claim 4 (cancelled)

Claim 5 (original): The system of claim 1, wherein the fundamental data include machine fundamental data.

Claim 6 (original): The system of claim 1, wherein the fundamental data include die fundamental data, and the die fundamental data include die standard status, and a range of settings that an operator can select to immediately adjust operation of a die.

Claim 7 (original): The system of claim 6, wherein the die fundamental data include a reference table of die-vs-part number.

Claim 8 (original): The system of claim 1, wherein the graphical user interface has icons for viewing the machines and viewing real-time information on the machines or on dies.

Claim 9 (currently amended): A method for monitoring machines operating at at least one shop floor, the method comprising the steps of:

providing information collectors for obtaining specific machine-related signals from the machines and changing the specific machine-related signals into computer-readable information via information collectors;

providing a monitoring computer for obtaining the computer-readable information from the information collectors and storing the obtained information in a database via a monitoring computer;
and

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providing a user interface for selectively illustrating ~~on a user interface~~ a part of the information stored in a ~~the~~ database.

Claim 10 (original): The method of claim 9, further including the step of storing fundamental data in the database.

Claim 11 (original): The method of claim 9, wherein the obtaining of the computer-readable information from the information collectors is performed by information-obtaining instructions that are stored in advance in the monitoring computer.

Claim 12 (original): The method of claim 9, wherein the computer-readable information obtained by the monitoring computer includes machine status and die status.

Claim 13 (original): The method of claim 12, further comprising the step of forecasting a lifetime of a die according to obtained die status information.

Claim 14 (original): The method of claim 10, further comprising the step of generating information of abnormality status of any of the machines by comparing the obtained information with the fundamental data.

Claim 15 (currently amended): A procedure of operating a system for monitoring machines operating on at least one shop floor, comprising in sequence the steps of:

logging into the system;

set setting fundamental data;

storing the data and outputting a corresponding report and ending this procedure, or further selecting real-time information;

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storing the data and the information and outputting a corresponding report and ending this procedure, or further inquiring of desired information;

verifying normality of the information and the data by comparing the information with pre-set standard criteria and thresholds;

inquiring of a historical ~~record~~ records of reasons for abnormalities if abnormal, or directly checking whether a schedule change is desired if normal;

analyzing reasons according to the historical records of reasons for abnormalities if abnormal;

if abnormal, storing the information, the data and the reasons for future reference and outputting a corresponding report and ending the procedure, or checking whether a schedule change is desired;

ending the procedure if no ~~changing or no reschedule~~ schedule change is desired;

determining whether to manually inputting input information of a schedule change if ~~changing or rescheduling a schedule change~~ is desired;

manually inputting and storing the information of a schedule change and outputting a corresponding report and ending the procedure if manual input is desired, or selecting and storing a standard schedule if manual input is undesired; and

outputting a report reflecting corresponding information and ending the procedure.